

ABSTRACT

TITLE: Role of topical nitrates in prevention of anal sphincter injury during transanal stapled anastomosis : a randomized controlled trial

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OBJECTIVES:

1. To assess if transanal stapler is associated with injury to the anal sphincters.
2. Effect of glyceryl trinitrate during transanal stapled anastomosis on the anal sphincter pressure.

METHODS:

This was a randomized controlled trial conducted in the colorectal unit of a tertiary care teaching hospital. Patients undergoing a transanal stapled anastomosis were randomized to 0.2% GTN use and no GTN use before staple insertion. Computer generated block randomization was used, and allocation was concealed using serially numbered opaque envelopes. All patients underwent preoperative anal manometry 1-3 days before surgery and postoperative manometry 15-90 days after surgery. Data was collected on a predetermined proforma and analyzed using IBM SPSS Statistics version 21. An intention to treat analysis was performed and p values of < 0.05 were taken as significant.

RESULTS:

43 patients were included in the study, 20 in the intervention arm and 23 in the control arm. There was a significant decrease in the resting pressure in both intervention and the control arm. The comparison of change in the mean resting pressure between two arms showed no statistical significance with a p value 0.202.

This shows that the use of 0.2% GTN before insertion of transanal stapler does not prevent the anal sphincter injury due to insertion of transanal stapler.

Keywords:

Anal sphincter, anorectal manometry, transanal stapler, anal sphincter injury, GTN, carcinoma rectum, resting pressure.